

INTERNATIONAL SEARCH REPORT

International Application No PCT/IB2004/050319

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 H05K13/04 H05K13/08
--

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC 7 H05K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)
--

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT
--

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 408 090 B1 (SALOMON WERNER ET AL) 18 June 2002 (2002-06-18) the whole document -----	1,4-9
A	US 4 978 224 A (KISHIMOTO SHIN ET AL) 18 December 1990 (1990-12-18) the whole document claim 1; figures 1,13,20,21 -----	1,8
A	US 2001/055069 A1 (HUDSON EDISON T) 27 December 2001 (2001-12-27) the whole document -----	1,8
A	US 4 941 256 A (CAPSON DAVID W ET AL) 17 July 1990 (1990-07-17) abstract; figure 3 claim 1; figures 1,13,20,21 -----	2,3
A	-----	1,8
	-/-	

<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.
--

<input checked="" type="checkbox"/> Patent family members are listed in annex.
--

* Special categories of cited documents:

- 'A' document defining the general state of the art which is not considered to be of particular relevance
- 'E' earlier document but published on or after the International filing date
- 'L' document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- 'O' document referring to an oral disclosure, use, exhibition or other means
- 'P' document published prior to the International filing date but later than the priority date claimed

- 'T' later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- 'X' document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- 'Y' document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- 'A' document member of the same patent family

Date of the actual completion of the International search

14 December 2004

Date of mailing of the International search report
--

23/12/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5618 Patentlaan 2 NL - 2280 HV Almere Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016

Authorized officer

Lommel, A

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB2004/050319

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 880 849 A (VAN DE VEN JOHANNES T A) 9 March 1999 (1999-03-09) cited in the application the whole document -----	1,8

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB2004/050319

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 6408090	B1	18-06-2002	CN	1320363 T	31-10-2001
			WO	0019800 A1	06-04-2000
			EP	1118262 A1	25-07-2001
			JP	2002526940 T	20-08-2002
US 4978224	A	18-12-1990	JP	1018004 A	20-01-1989
			JP	1018049 A	20-01-1989
			JP	1088204 A	03-04-1989
			JP	1161310 A	26-06-1989
			JP	1165903 A	29-06-1989
US 2001055069	A1	27-12-2001	AU	4098801 A	17-09-2001
			WO	0167831 A2	13-09-2001
US 4941256	A	17-07-1990	CA	1285661 C	02-07-1991
US 5880849	A	09-03-1999	DE	69605103 D1	16-12-1999
			DE	69605103 T2	25-05-2000
			EP	0809926 A1	03-12-1997
			WO	9722238 A1	19-06-1997
			JP	11502311 T	23-02-1999